UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 16 2016

James A. (Jac) Capp
Chief
Watershed Protection Branch
Environmental Protection Division
Georgia Department of Natural Resources
2 Martin Luther King Jr. Drive
Suite 1152 East
Atlanta, Georgia 30334

Dear Mr. Capp:

The United States Environmental Protection Agency has completed its review of amendments to Chapter 391-3-6-.03 of Georgia's Rules and Regulations for Water Quality Control. The revisions were adopted as a result of Georgia Environmental Protection Division's (GAEPD) triennial review of water quality standards (WQS), as required under the provisions of Clean Water Act (CWA or the Act) Section 303(c). GAEPD held six public meetings from February 6, 2013 until December 4, 2014, regarding development of these revised water quality criteria. The proposed revisions were publically noticed on EPD's website on May 8, 2015, and the public comment period ran through June 26, 2015. The State held public hearings on the proposed revisions on June 26, 2015. The revisions were adopted by the Board of Natural Resources on August 26, 2015, and became effective October 22, 2015. GAEPD submitted new and revised WQS to the EPA by letter dated March 22, 2016, which was received by the EPA on March 29, 2016. GAEPD's submittal included a certification letter dated February 23, 2016, signed by Samuel Olens, Georgia Attorney General, which stated that the revisions were duly adopted in accordance with State law.

As laid out in the enclosed decision document, titled *Decision Document of the United States Environmental Protection Agency Review of Amendments to Georgia's Water Quality Regulations at Chapters 391-3-6-.03 and 391-3-6-.06 Under § 303(c) of the Clean Water Act,* the EPA is approving all new and revised WQS as documented in 391-3-6-.03 and 391-3-6-.06(4). These revisions include amendments to designate a section of the Conasauga River as an Outstanding National Resource Water, to describe Tier 3 antidegradation requirements, to adopt a site specific copper criteria for Buffalo Creek, to revise bacterial criteria for recreational waters, to update specific water use classifications of various waterbodies, to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek, to clarify the definition of total lake loading of phosphorus, and to remove a variance to the narrative toxicity standard on Cabin Creek.

In addition to our review pursuant to Section 303 of the Clean Water Act, Section 7(a)(2) of the Endangered Species Act requires federal agencies, in consultation with the U.S. Fish and Wildlife Service (FWS) (and National Marine Fisheries Service where applicable), to ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of designated critical habitat of such species. On June 16, 2016, FWS concurred

with the EPA's determination that the revisions to Georgia's Water Quality Regulations contained in Chapter 391-3-6-.03 either have no effect or may affect, but are unlikely to adversely affect listed species or habitat. The EPA's concurrence letter can be found in Appendix B of the decision document.

We would like to commend you and your staff for your continued efforts to protect and enhance Georgia's waters during this rulemaking. We appreciate Georgia's efforts throughout the WQS development process. If you have questions regarding this action by the EPA, please contact me at (404) 562-9345 or have a member of your staff contact Mr. Jason Poe (404) 562-9827.

Sincerely,

James D. Giattina
Director
Water Protection Division

Enclosure

cc: Elizabeth Booth, GAEPD

Decision Document of the United States Environmental Protection Agency Review of Amendments to Georgia's Water Quality Regulations at Chapters 391-3-6-.03 and 391-3-6-.06 under § 303(c) of the Clean Water Act

This document summarizes the EPA review of the revisions to Water Quality Regulations at Chapters 391-3-6-.03 and 391-3-6-.06 adopted by the State of Georgia. These revisions were adopted as a result of Georgia's water quality standards rulemaking. The state submitted the water quality standards (WQS) revisions by letter dated March 22, 2016, from James A. Capp, Georgia Environmental Protection Division, Watershed Protection Branch Chief, to James D. Giattina, Director, Water Protection Division, Environmental Protection Agency, Region 4. The EPA received the revisions on March 29, 2016. The submittal to the EPA was accompanied by certification from Samuel Olens, Georgia Attorney General, dated February 23, 2016, that the standards revisions were duly adopted pursuant to the state law of Georgia. The public comment period for the rulemaking began on May 8, 2015, and ended on June 26, 2015, and a public hearing was held on June 26, 2015. In response to the public comments received, the state prepared a Response to Comments dated August 6, 2015. The revisions were adopted by the Board of Natural Resources on August 26, 2015, and became effective October 22, 2015.

Additions to the State's WQS regulations are shown underlined below, while deletions to the regulations are shown with strikethrough. As discussed more fully below, where the EPA has determined that the State's rule revisions are themselves new or revised WQS, the EPA has reviewed and acted on these revisions pursuant to Section 303(c) of the Clean Water Act (CWA).[1] Section 303 of the CWA, 33 U.S.C. § 1313, requires states to establish WQS and to submit any new or revised standards to the EPA for review and approval or disapproval. The EPA's implementing regulations require states to adopt water quality criteria that protect the designated use. See 40 C.F.R. § 131.11(a). Such criteria must be based on a sound scientific rationale, and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use. In addition, the EPA's regulations require that in establishing criteria, a state shall consider WQS of downstream waters and shall ensure that its WQS provide for the attainment and maintenance of WQS of downstream waters. See 40 C.F.R. § 131.10(b).

A state's submission of water quality criteria must include (1) the methods used and analyses conducted to support water quality standards revisions, (2) water quality criteria sufficient to protect the designated uses and (3) a certification by the State Attorney General or other appropriate legal authority within the state that the WQS were duly adopted pursuant to state law. See 40 C.F.R. § 131.6.

Based on the review of the State's submittal, the EPA has determined that the new and revised standards listed below are consistent with 40 C.F.R. Part 131 and Section 303 of the CWA. Therefore, the EPA is approving the following new and revised WQS:

- Revisions of Rule 391-3-6-.03(2) to designate a section of the Conasauga River as an Outstanding National Resource Water and to describe Tier 3 antidegradation requirements.
- Revisions of Rule 391-3-6-.03(5) to adopt a site specific copper criteria for Buffalo Creek.
- Revisions of Rule 391-3-6-.03(6) to revise bacterial criteria for recreational waters.

[1] The EPA has provided FAQs on "What is a New or Revised Water Quality Standard Under CWA 303(c)(3)?" at http://water.epa.gov/scitech/swguidance/standards/cwa303faq.cfm. The link provides detailed information of such analysis.

- Revisions of Rule 391-3-6-.03(14) to update specific water use classifications of various waterbodies and to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek.
- Revisions of Rule 391-3-6-.03(17) to clarify the definition of total lake loading of phosphorus.
- Revisions of Rule 391-3-6-.06(4) to remove a variance to the narrative toxicity standard on Cabin Creek.

New and Revised Standards that are Approved by the EPA:

The State adopted the following revisions, which are shown in underline (new provisions) and strikethrough (deleted provisions):

Revisions of Rule 391-3-6-.03(2) to designate a section of the Conasauga River as an Outstanding National Resource Water and to describe Tier 3 antidegradation requirements.

(a) The purposes and intent of the State in establishing Water Quality Standards are to provide enhancement of water quality and prevention of pollution; to protect the public health or welfare in accordance with the public interest for drinking water supplies, conservation of fish, wildlife and other beneficial aquatic life, and agricultural, industrial, recreational, and other reasonable and necessary uses and to maintain and improve the biological integrity of the waters of the State.
(b)~~(i) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.~~ The following paragraphs describe the three tiers of the State's waters.
(i) Tier 1 - Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
(ii) Tier 2 - Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the division finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the division's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the division shall assure water quality adequate to protect existing uses fully. Further, the division shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
~~(c)~~(iii) Tier 3 - Outstanding National Resource Waters (ONRW). This designation will be considered for an outstanding national resource waters, such as waters of National or State parks and wildlife refuges and waters of exceptional aesthetic, historic, recreational, or ecological significance. For waters designated as ONRW, existing water quality shall be maintained and protected. The following waters below are designated as ONRWs:
Conasauga River within the Cohutta Wilderness Area of the Chattahoochee National Forest (headwaters to Forest Service Road 17).

4. Activities that result in short-term, temporary, and limited changes to water quality may be allowed if authorized by the Division and the water quality is returned or restored to conditions equal to or better than those existing prior to the activities.

The state antidegradation policy is being revised to clarify the three antidegradation Tiers – specifically to include consideration of aesthetic and historic significance attributes when designating Outstanding National Resource Waters (ONRW) and to add language that activities that result in short-term, temporary, and limited changes to water quality may be allowed if authorized by the Division. This is consistent with 40 C.F.R. § 131.12(a)(3), which states that, "Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected." It is also consistent with Water Quality Standards Regulation preamble that, "States may allow some limited activities which result in temporary and short-term changes in water quality…" [2]With this action the State also added the Conasauga River as an ONRW.

The revisions also designate the Conasauga River in the Cohutta Wilderness Area as Georgia's first ONRW. The Conasauga River headwaters were first nominated for ONRW status in 2007 by the Environment Georgia Research and Policy Center. GAEPD worked with stakeholders to update the 2004 Procedures for Selection of Outstanding National Resource Waters, completing revisions in 2011. On June 22, 2012, the Environment Georgia Research and Policy Center submitted a complete nomination package which included waterbody characteristics, a mapped delineation, reasons for nomination, a stakeholder inventory, control and enforcement documentation, nominating groups, a cost benefits analysis, documentation of public involvement, landuse/landcover information, and a watershed inventory. The designation applies to an eleven-mile reach of the Conasauga River within the Cohutta Wilderness Area of the Chattahoochee National Forest (headwaters to Forest Service Road 17). The nomination package documents high existing water quality and ecological value, exceptional recreational or aesthetic value, and strong community support for ONRW designation. The designation therefore is consistent with the requirements of 40 C.F.R. § 131.12(a)(3), ensuring the maintenance and protection of the Conasauga's exceptional recreational or ecological significance.

Revisions of Rule 391-3-6-.03(5) to adopt a site specific copper criteria for Buffalo Creek.

(e)(ii) Site-specific Copper criteria developed using the biotic ligand model (BLM): Buffalo Creek (Richards Lake Dam to confluence with Little Tallapoosa River):

$$\text{Acute criteria} = 4.9X10^{8} \; e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{\ln(DOC)-32.18}{-5.453}\right)^{2}\right)\right)}$$

$$\text{Chronic criteria} = 3.043X10^{8} \; e^{\left(-0.5\left(\left(\frac{(\ln(pH)-2.316)}{-0.1816}\right)^{2}+\left(\frac{\ln(DOC)-32.18}{-5.453}\right)^{2}\right)\right)}$$

The State revision of copper criteria adds site-specific criteria for Buffalo Creek, from Richards Lake Dam to confluence with Little Tallapoosa River. The criteria were developed using the Biotic Ligand Model (BLM) to determine metal toxicity correcting for bioavailability based on waterbody chemistry. Acute and chronic criteria were developed to protect against immediate effects, such as mortality, and long term effects, such as reproduction, growth and survival. The BLM uses ten water chemistry

[2] Federal Register Volume 48, Number 217, Tuesday, November 8, 1983

parameters to calculate a freshwater copper criterion, but studies indicated that the bioavailability of copper in Buffalo Creek is primarily dependent on the instream pH and Dissolved Organic Carbon (DOC), so the site-specific copper criteria are expressed as equations based on instream pH and DOC concentrations. The criteria were developed following EPA's Aquatic Life Ambient Freshwater Quality Criteria for Copper, February 2007 (EPA-822-R-07-001), are protective of the designated uses for this stream segment and are consistent with the CWA and 40 C.F.R. Part 131.

Revisions of Rule 391-3-6-.03(6) and 391-3-6-.03(12) to revise bacterial criteria for recreational waters.

(6)(a)(i) Bacteria: For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of fecal ~~coliform~~bacteria.

(b)(i) Bacteria: ~~Fecal coliform not to exceed the following geometric means based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours:~~

1. Coastal waters ~~100 per 100 mL:~~ Culturable enterococci not to exceed a geometric mean of 35 CFU (colony forming units) per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 CFU per 100 mL in the same 30-day interval.

2. All other recreational waters ~~200 per 100 mL:~~ Culturable E. coli not to exceed a geometric mean of 126 CFU (colony forming units) per 100 mL. The geometric mean duration shall not be greater than 30 days. There shall be no greater than a ten percent excursion frequency of an E. coli statistical threshold value (STV) of 410 CFU per 100 mL in the same 30-day interval.

~~3. Should water quality and sanitary studies show natural fecal coliform levels exceed 200/100 mL (geometric mean) occasionally in high quality recreational waters, then the allowable geometric mean fecal coliform level shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing fresh water streams~~

(c)(iii) Bacteria: 1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall

not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of ~~fecal coliform~~bacteria.

(12) ~~Fecal Coliform~~Bacteria Criteria. The criteria for ~~fecal coliform~~ bacteria provide the regulatory framework to support the USEPA requirement that States protect all waters for ~~the use of primary contact~~ recreational use ~~or swimming~~. The bacterial indicators for primary contact recreational waters are E. coli and enterococci. The bacterial indicator for secondary contact recreational waters is fecal coliform. ~~This is a worthy national goal, although potentially unrealistic with the current indicator organism, fecal coliform bacteria, in use today. To assure that waters are safe for swimming indicates a need to test waters for pathogenic bacteria. However, analyses for pathogenic bacteria are expensive and results are generally difficult to reproduce quantitatively. Also, to ensure the water is safe for swimming would require a whole suite of tests be done for organisms such as Salmonella, Shigella, Vibrio, etc. as the presence/absence of one organism would not document the presence/absence of another. This type of testing program is not possible due to resource constraints. The environmental community in the United States has based the assessment of the bacteriological quality of water on testing for pathogenic indicator organisms, principally on the coliform group. The assessment of streams, rivers, lakes, and estuaries in Georgia and other States is based on fecal coliform organisms.~~
(a) Fecal c~~C~~oliform, E. coli and enterococci bacteria live in the intestinal tract of warm blooded animals including man. These organisms are excreted in extremely high numbers~~, averaging about 1.5 billion coliform per ounce of human feces~~. Pathogenic bacteria also originate in the fecal material of diseased persons. Therefore, waters with high levels of ~~fecal coliform~~ bacteria represent potential problem areas for swimming. Scientific studies indicate there is a positive correlation between E. coli and enterococci counts and gastrointestional illness. However, there is no positive scientific evidence correlating elevated fecal coliform counts with transmission of enteric diseases. In addition, these bacteria can originate from any warm blooded animal or from the soil.
(b) Monitoring programs have documented ~~fecal coliform~~bacterial levels in excess of the criteria in many streams and rivers in urban areas, agricultural areas, and even in areas not extensively impacted by man such as national forest areas. This is not a unique situation to Georgia as similar levels of fecal coliform bacteria have been documented in streams across the nation. ~~The problem appears to lie in the lack of an organism which specifically indicates the presence of human waste materials which can be correlated to human illness. Other organisms such as the Enterococci group and E. coli have been suggested by the USEPA as indicator organisms. However, testing using these organisms by States and the USEPA has indicated similar problems with these indicator organisms.~~
~~(c) The Environmental Protection Division will continue to conduct monitoring to evaluate the use of E. coli and Enterococci as indicators of bacteriological quality in~~

~~Georgia. The Environmental Protection Division will also conduct studies to determine if a better human specific indicator can be found to replace current indicator organisms.~~

The State revisions adopt bacteria criteria for waters designated as Recreation, based on EPA's 2012 Recreational Bacteria Criteria recommendations. Epidemiological studies determined that E. coli and enterococci are better indicators of gastrointestinal illness than fecal coliform. The criteria were adopted corresponding with EPA's Recreational Water Quality Criteria, November 2012, (EPA-820-F-12-058), are protective of the recreational use and are consistent with the CWA and 40 C.F.R. Part 131.

The State revised Rule 391-3-6-.03(14) to update specific water use classifications of various waterbodies.

All littoral waters on the ocean side of ~~St. Simons,~~ Sea~~,~~ and Sapelo Islands, and on the ocean and sound side of St. Simons Island		Recreation
Buttermilk Sound	Reimolds Pasture	Recreation
Chattahoochee River	Atlanta (Peachtree Creek) to Cedar Creek	Fishing[‡]
Headwaters of Unnamed Tributary to Bethlehem Creek	Bethlehem Creek to Lake Franklin, F.D. Roosevelt State Park Beaches	Recreation
Little Kolomoki Creek	Lake Kolomoki, Kolomoki Mounds State Park Beach	Recreation
Smith Creek	Unicoi Lake, Unicoi State Park Beach	Recreation
Headwaters of Gold Mine Branch	Fort Mountain Lake, Fort Mountain State Park Beach	Recreation
Tributaries to Heath Creek	Rocky Mountain Public Fishing Lakes, Rocky Mountain Public Fishing Area	Recreation
Flint River	Georgia Hwy. 27 to Georgia Power Dam at Lake Worth, Albany including Lakes Blackshear, Chehaw, and Worth	Recreation

Little River	Reed Bingham State Park Lake, Reed Bingham State Park Lake Beach	Recreation
Big Sandy Creek	Chief McIntosh Lake, Indian Springs State Park Beaches	Recreation
Headwaters of Little Ocmulgee River	Little Ocmulgee Lake, Little Ocmulgee State Park Beach	Recreation
Towaliga River	High Falls Lake, High Falls State Park Beaches	Recreation
Hard Labor Creek	Lake Rutledge, Hard Labor Creek State Park Beaches	Recreation
Marbury Creek	Fort Yargo Lake, Fort Yargo State Park Beaches	Recreation
Julienton River	Contentment Bluff Sandbar and Dallas Bluff Sandbar	Recreation
Skidaway River	Skidaway Narrows in Chatham County	Recreation
All littoral waters on the ocean side of Cumberland ~~and Jekyll~~ Islands		Recreation
All littoral waters on the ocean and sound side of Jekyll Island		Recreation
South Brunswick River	Blythe Island Sandbar	Recreation
Unnamed Tributary to Lick Creek	Lake Liberty, A.H. Stephens State Park Beach	Recreation
Big Creek	Lake Laura S. Walker, Laura Walker State Park Beach	Recreation
Wolf Creek	Lake Trahlyta, Vogel State Park Beach	Recreation

The State's action to add the Recreation use to these segments recognizes current use of these waters for general recreational activities, such as water skiing, boating, and swimming. Due to the provisions of 391-3-6-.03(6)(b) that uses for the Recreation use include "[g]eneral recreational activities such as water

skiing, boating, and swimming, or for any other use requiring water of a lower water quality", the assignment of the Recreation use also incorporates protective criteria for the aquatic life uses of the Fishing use. Therefore, the assignment of the Recreation use for these segments provides for the protection of the CWA Section 101(a) use goals and is consistent with 40 C.F.R. Part 131.

The State revised Rule 391-3-6-.03(14) to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek.

The State revisions remove the footnote to Specific Water Use Classifications at 391-3-6-.03(14) for the Chattahoochee River Atlanta (Peachtree Creek) to Cedar Creek, which states that, "Specific criteria apply at all times when the river flow measured at a point immediately upstream from Peachtree Creek equals or exceeds 750 cfs (Atlanta gage flow minus Atlanta water supply withdrawal)." The use classification for this section of the River and the associated footnote were approved by the EPA on August 18, 1975, to upgrade the use classification and associated water quality criteria from Industrial to Fishing for all flows above 750 cubic feet per second or cfs. At that time, the State could not ensure that the WQS could be met below 750 cfs due to significant amounts of industrial pollution in the River. With the footnote in place, exceedances of WQS were not considered an exceedance under the CWA if the flow of the River was below 750 cfs. With this revision to remove the footnote, the use designation of Fishing and all associated WQS now apply.

The Fishing designated use as described in Rule 391-3-6-.03(6)(c) includes the "Propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation[3] in and on the water; or for any other use requiring water of a lower quality". The EPA notes that pursuant to Rule 391-3-6.03(9), with the removal of the footnote the specific criteria for the Fishing designated use now apply at all flows, including dissolved oxygen, temperature, pH, and bacteria. General criteria, such as narratives, metals, pesticides and organic compounds, now apply to the River in the same manner as to all other waters in the state. Therefore, with this change, the EPA recommends that the State re-evaluate the measured low flows and calculated critical low flows and ensure that they are properly used to apply all criteria in this section of the River. In 2014, the EPA updated the section on critical low flows in the Water Quality Standards Handbook noting the ongoing need for states and tribes to continually update this type of information (EPA WQS Handbook Chapter 5, See Section 5.2, pages 13-14.) For instance, the Handbook states that, "…prolonged droughts have resulted in a reduction of the low-flow minimums released on regulated rivers or revisions to drought control manuals to allow for further reductions of the low-flow values. …It may be prudent for states and tribes to review and revise, as appropriate, their critical low-flow values during the triennial review process to account for changes to historical flow patterns."

Once the new low flows are updated, the State should also re-evaluate monitoring, assessment, Total Maximum Daily Loads (TMDLs), and permitting on this segment of the Chattahoochee River to ensure that all uses are protected at all flows and that criteria will not be exceeded or uses be impaired should the River go below 750 cfs. The EPA appreciates EPD directly addressing its intention to do this in the public stakeholder meetings in December of 2014 (Appendix A). EPD stated, "…the 750 cfs was the

[3] "Secondary contact recreation" is incidental contact with the water, wading, and occasional swimming.

minimum flow used to develop wasteload allocations for dischargers to the Chattahoochee River downstream from Peachtree Creek…EPD intends to ensure that WQS are met at all flows."[5]

The EPA will continue to evaluate the Reasonable Potential Analyses (RPAs) contained in the National Pollutant Discharge Elimination System permits as they come in for reissuance to ensure that the appropriate critical conditions are used. The EPA is also ready to assist as needed with the review of any revisions to TMDLS. Should the measured or calculated flow values change, the permit limits based on those values would have to be re-evaluated as well as the threshold at which numeric nutrient criteria apply. The re-evaluation of critical low flows is important to ensure that all permit limits and TMDLs remain protective because the River has been operated with lower flows in the past. Some parameters are more readily measured and modeled, such as dissolved oxygen, yet EPD should ensure that all narrative and numeric criteria will be protected in addition to the implicit protection of the flows needed to meet designated uses. The EPA clarified the need to protect downstream uses and aquatic life, including any changes relating to either pollutants or pollution, such as hydrologic alteration, in its publication, Protection of Downstream Waters in Water Quality Standards: Frequently Asked Questions (EPA-820-F-14-001) as well as in the *Draft EPA-USGS Technical Report: Protecting Aquatic Life from Effects of Hydrologic Alteration* (EPA Report 822-P-15-002). The removal of the footnote completes the upgrade of this water to a full Fishing use, meeting the CWA Section 101(a)(2) uses, and ensures the protection of the designated use of the River segment at all flows. Therefore, the removal is consistent with the CWA and 40 C.F.R. Part 131.

Revisions of Rule 391-3-6-.03(17) to clarify the definition of total lake loading of phosphorus.

> (17)(a)(iv) Total Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre foot of lake volume per year.
> (v) ~~Fecal Coliform~~ Bacteria:
> 1. U.S. 27 at Franklin to New River: Fecal coliform bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).
> 2. New River to West Point Dam: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).
>
> (17)(b)(iv) Total Phosphorous: Total lake loading shall not exceed 2.4 pounds per acre-foot of lake volume per year.
> (v) ~~Fecal Coliform~~Bacteria:
> 1. Georgia Highway 39 to Cowikee Creek: Fecal coliform bacteria shall not exceed the Fishing criterion as presented in 391-3-6-.03(6)(c)(iii).
> 2. Cowikee Creek to Walter F. George Dam: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).
>
> (17)(c)(iv) Total Phosphorous: Total lake loading shall not exceed 5.5 pounds per acre-foot of lake volume per year.
> (v) ~~Fecal Coliform~~Bacteria: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

[5] GA EPD PowerPoint presentation at the first public stakeholder meeting, slide 31, December 2, 2014.

(17)(d)(iv) Total Phosphorous: Total lake loading shall not exceed 1.3 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria:
1. Etowah River, State Highway 5 to State Highway 20: Fecal coliform bacteria shall not exceed the Fishing Criterion as presented in 391-3-6-.~~-~~.03(6)(c)(iii).
2. Etowah River, State Highway 20 to Allatoona Dam: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.~~-~~.03(6)(b)(i).

(17)(e)(iv) Total Phosphorous: Total lake loading shall not exceed 0.25 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

(17)(f)(iv) Total Phosphorous: Total lake loading shall not exceed 172,500 pounds or 0.46 pounds per acre-foot of lake volume per year.
(v) ~~Fecal Coliform~~Bacteria: ~~Fecal coliform bacteria~~E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).

The State action clarifies that loadings are of total phosphorus (versus elemental or other forms of phosphorus) and updates the bacterial indicator based on the revised bacteria criteria. These revisions ensure clarity and consistency in the standards and are consistent with the CWA and 40 C.F.R. Part 131.

Revisions of Rule 391-3-6-.06(4) to remove a variance to the narrative toxicity standard on Cabin Creek.

391-3-6-.06(4)(d)(5)(v)(d)(vii) Permits issued or reissued after the adoption of this paragraph may include site specific temporary exceptions to the applicable water quality standards under Chapter 391-3-6-.03(5)(e) when the requirements of this paragraph are met and the temporary exception is specifically authorized herein. Where a discharger cannot meet applicable limits for whole effluent toxicity because of a water quality based whole effluent toxicity criteria, site-specific temporary exceptions may be allowed on effluent dominated receiving streams under 7-day, 10-year minimum stream flow (7Q10) conditions provided that it has been demonstrated that the permitted discharge will comply with all chemical specific and other applicable water quality criteria, that the receiving stream will support a balanced indigenous population of aquatic life, and that controls more stringent than those required by Section 301(b) and 306 of the Federal Act for achieving whole effluent toxicity criteria would result in substantial and widespread adverse economic and social impacts to the affected communities. These site-specific exceptions shall be applicable only to the wastewater discharge as permitted at the time the exception is authorized with no changes in process or wastewater characteristics that would adversely affect water quality in the receiving stream or adversely affect the ability of potential new pollution abatement technologies to attain compliance with the whole effluent toxicity criteria. These site-specific exceptions shall be reviewed consistent with 40 CFR 131.20 at least once in every 3- year period. If it is determined that feasible new pollution abatement technologies or alternatives have become available to allow compliance with whole effluent toxicity criteria, these site-specific exceptions may be

revoked and the NPDES permits modified to require implementation of such pollution abatement technologies or alternatives as soon as reasonably practicable. Along with this permit modification will be a requirement for the permittee to comply with the water quality based whole effluent toxicity criteria after installation of these technologies. ~~The following discharges and stream segments are hereby granted temporary exception from water quality standards for water quality based whole effluent toxicity criteria: Springs Industries Griffin Finishing Plant, NPDES Permit No. GA0003409, discharge to Cabin Creek in the Ocmulgee River Basin in Spalding County from the point of discharge downstream to Walkers Mill Road.~~

The State action removes a temporary exception from WQS for whole effluent toxicity criteria for the discharge to Cabin Creek in the Ocmulgee River Basin in Spalding County. This variance was adopted by Georgia in April 2000, and approved by EPA in January 2002 for the Spring Industries Griffin Finishing Plant discharge downstream to the Walkers Mill Road crossing in Cabin Creek in the Ocmulgee River Basin. The facility closed in December 2009 and the temporary exception from water quality standards is no longer needed. Its removal reinstates all criteria for this stream segment and is consistent with the CWA and 40 C.F.R. Part 131.

Review of Non-substantive Revisions to Water Quality Standards

The EPA determined that the changes within Rule 391-3-6-.03 listed below are editorial, non-substantive changes to Georgia's EPA-approved WQS. The EPA approves the editorial, non-substantive changes as being consistent with the CWA and the EPA's implementing regulations. The EPA notes, however, that its approvals of these editorial, non-substantive changes do not re-open the EPA's prior approvals of the underlying substantive WQS.

391-3-6-.03 "Water Use Classifications and Water Quality Standards.~~*~~"
~~*Applicable to Intrastate and Interstate Waters of Georgia.~~

(3)(i) "Naturally variable parameters." It is recognized that certain parameters including dissolved oxygen, pH, bacteria, turbidity and water temperature, vary through a given period of time (such as daily or seasonally) due to natural conditions. Assessment of State waters may allow for a 10% excursion frequency for these parameters.
This change addresses a water quality assessment process and is not a new or revised water quality standard.

(3)(m) "Significant Figures." The number of "~~S~~significant ~~F~~figures" represented in numeric criteria are the number of figures or digits that have meaning as estimated from the accuracy and precision with which the quantity was measured and the data were rounded off.
This change addresses a data quality issue and is not a new or revised water quality standard.

(5)(e)(i) 3. 2,4,5-Trichlorophenoxy propionic acid (TP Silvex) 50 µg/L ~~(TP Silvex)~~

(5)(e)(ii) [4] This pollutant is addressed in 391-3-6-.06. ~~[4] This pollutant is addressed in 391-3-6-.06.~~

Nickel
acute criteria = $(e^{(0.8460[\ln(\text{hardness})] + 2.255)})(0.998)$ µg/L
chronic criteria = $(e^{(0.8460[\ln(\text{hardness})] + 0.0584)})(0.997)$ µg/L
(5)(e)(iv)
11. Benzo(a)Pyrene (CAS RN[1] 50328) 0.018 µg/L
43. 3,3'-Dichlorobenzidine (CAS RN[1] 91941) 0.028 µg/L

(6)(i) Dissolved Oxygen ~~(D.O.)~~:

(7) Natural Water Quality. It is recognized that certain natural waters of the State may have a quality that will not be within the general or specific requirements contained herein. These circumstances do not constitute violations of WQS. This is especially the case for the criteria for dissolved oxygen, temperature, pH and ~~fecal coliform~~bacteria. NPDES permits and best management practices will be the primary mechanisms for ensuring that discharges will not create a harmful situation.

The EPA's action to approve new and revised standards is subject to completion of consultation under Section 7(a)(2) of the Endangered Species Act (ESA), 16 U.S.C. § 1536(a)(2). Based on review of available information, the EPA has determined that the Agency has "no discretion" in the approval of the revisions to the water quality criterion for revisions of Rule 391-3-6-.03(6) to revise bacterial criteria for recreational waters under ESA Section 7 based on the fact that the criterion are established for the protection of human health as an endpoint. Also, the EPA determined that the Agency has "no discretion" in the designation of the Conasauga River as an Outstanding National Resource Water and the revision of the State's antidegradation policy clarifying the three antidegradation tiers because the EPA is not authorized to require anything more than the requirements listed in 40 CFR. §131.12. The EPA prepared a Biological Evaluation (BE) in support of the Agency's approval of the new and revised WQS provisions, and this BE was provided to the U.S. Fish and Wildlife Service (FWS). In the BE, the EPA did note the presence of several federally-listed threatened and endangered species and designated critical habitat in the areas under consideration. The EPA determined the following revision was "may affect, not likely to adversely affect" federally listed species: to adopt a site specific copper criteria for Buffalo Creek. The EPA determined the following revisions would have "no effect" on federally-listed species: to update specific water use classifications of various waterbodies, to remove a footnote referencing the streamflow at which specific criteria apply in the Chattahoochee River from Atlanta (Peachtree Creek) to Cedar Creek, to clarify the definition of total lake loading of phosphorus, and to remove a variance to the narrative toxicity standard on Cabin Creek. In a letter dated June 17, 2016, Strant Colwell, Coastal Supervisor of Georgia Ecological Services, FWS, concurred with the EPA's determination that the WQS revisions were either "may affect, not likely to adversely affect" federally-listed species or would have "no effect" on federally-listed species (Appendix B).

Conclusion

Based on the reasons outlined above, the EPA concludes that the requirements of the CWA and 40 CFR §131 have been met for the new or revised WQS. The EPA approves the revised standards addressed in this Decision Document pursuant to Section 303(c) of the CWA.

8/15/16
Date

James D. Giattina
Director
Water Protection Division

Appendix A (GA EPD PowerPoint presentation at the first public stakeholder meeting, slide 31, December 2, 2014)

750 cfs Footnote

- Chattahoochee River, Atlanta (Peachtree Creek) to Cedar Creek footnote states that specific criteria apply at all times when the river flow upstream from Peachtree Creek equals or exceeds 750 cfs.
- Historically, the 750 cfs was the minimum flow used to develop wasteload allocations for dischargers to the Chattahoochee River downstream from Peachtree Creek.
- However, EPD intends to ensure that water quality standards are met at all flows.

Appendix B (FWS BE Concurrence Letter)

United States Department of the Interior

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Fax: (706) 613-6059

West Georgia Sub-Office
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Fort Benning, Georgia 31995-2560
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Coastal Sub-Office
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Townsend, Georgia 31331
Phone: (912) 832-8739
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June 17, 2016

Ms. Joanne Benante
U. S. Environmental Protection Agency
Water Quality Planning Branch
61 Forsyth Street
Atlanta, Georgia 30303-8960

Service File Number:	04EG1000-2016-CPA-0361
Service Consultation File Number:	04EG1000-2016-I-1277
Service Contaminant Activity Code:	04EG1000-2016-EC-0037
Date Received:	April 27, 2016
Project:	Georgia Triennial Review Standards Approval
Applicant:	USEPA

Dear Ms. Benante:

The U.S. Fish and Wildlife Service (Service) has reviewed the U. S. Environmental Protection Agency's (EPA) letter requesting consultation dated April 21, 2016, for the approval of revisions to the State of Georgia's water quality standards (WQS). Per their letter and associated Biological Evaluation (BE), the EPA requested concurrence on their determinations that specific revisions may affect, but are not likely to adversely affect any federally listed species. In a phone call between the Service and EPA on May 25th, 2016, the EPA also requested concurrence on their determinations that specific revisions would have no effect on federally listed species. This letter is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*).

PROPOSED WQS REVISIONS

In the BE, the EPA determined that three proposed WQS revisions would have no effect on listed species. These revisions include the removal of a footnote indicating that a portion of the Chattahoochee River is exempt from meeting WQS when flow falls below 750 cubic feet per second, a clarification of the definition for total lake loading of phosphorus, and the removal of a variance for a toxicity standard on Cabin Creek. The EPA also determined that a site-specific copper criterion in Buffalo Creek may affect, but is not likely to adversely affect the threatened finelined pocketbook mussel (*Lampsilis altilis*), the threatened northern long-eared bat (*Myotis septentrionalis*), the endangered gray bat (*Myotis grisescens*), and the endangered Indiana bat (*Myotis sodalis*).

Removal of streamflow footnote for the Chattahoochee River

Currently, a footnote in Georgia's Rule 391-3-6-.03(14) allows for WQS to be voided when flow in the Chattahoochee River between Peachtree Creek and Cedar Creek falls below 750 cubic feet per second. The proposed removal of the footnote will require that WQS for this section of the Chattahoochee River be met at all times, regardless of flow, which in turn should be more protective of ecological resources. Additionally, no listed species are believed to occur within this segment of the Chattahoochee River. The Service concurs with EPA's determination that the removal of the streamflow footnote in the Chattahoochee River will have no effect on federally listed species.

Clarification of the definition for total lake loading of phosphorus

A proposed revision in Rule 391-3-6-.03(17) clarifies that total lake loading of phosphorus for lakes with phosphorus standards is to be quantified as total phosphorus. As this revision is a simple clarification and does not institute new phosphorus loading standards, the Service concurs with EPA's determination that the clarification of total lake loading of phosphorus will have no effect on federally listed species.

Removal of a variance to the toxicity standard on Cabin Creek

A proposed revision in Rule 391-3-6-.06(4) removes a variance that granted an exception for whole effluent toxicity criteria for discharges from the Springs Industries Griffin Finishing Plant to Cabin Creek in Spalding County. The aforementioned facility closed in 2009; therefore the WQS exception is no longer needed. This segment of Cabin Creek will be subject to all applicable criteria. The Service concurs with EPA's determination that the removal of a variance to the toxicity standard on Cabin Creek will have no effect on federally listed species.

Adoption of a site-specific copper criterion for Buffalo Creek

A proposed revision in Rule 391-3-6-.03(5) establishes a site specific copper criterion for Buffalo Creek in Carroll County, Georgia. Currently, Buffalo Creek is subject to a copper criterion that is determined by a water hardness-based equation, where the allowable copper concentration correlates positively to measured hardness. The proposed copper criterion is

based on the use of the Biotic Ligand Model (BLM) which incorporates additional water quality parameters into the determination of an allowable copper concentration. The use of the BLM to determine copper water quality criteria is fully described in an EPA document entitled "Aquatic Life Ambient Freshwater Quality Criteria- Copper, February 2007 Revision" (EPA-822-R-07-001). The Georgia Environmental Protection Division (EPD) determined, through a water sampling study in Buffalo Creek, that dissolved organic carbon (DOC) and pH accounted for much of the variability in the BLM output. In order to simplify the model for use by EPD, all other water quality parameters were set constant at worst-case values from the sampling study (worst-case being defined as the parameter values leading to the greatest copper bioavailability) and an equation was developed. EPD can now use measured DOC and pH values from Buffalo Creek in the equation to determine a specific copper criterion after each sampling event. Use of this modified BLM equation is expected to lead to a higher copper criterion than that determined by the previous hardness-based method. Development of the modified BLM model is detailed in a report prepared by Resolve Environmental Engineering, Inc. entitled "Biotic Ligand Model Report for Site-Specific Copper Water Quality Standard, Buffalo Creek, Carroll County, Georgia" dated February 2015.

Gray bat, Indiana bat, and northern long-eared bat

The gray bat, Indiana bat, and northern long-eared bat may occur in the vicinity of Buffalo Creek, though their specific use of the area is unknown. While the proposed copper criterion may allow copper concentrations in Buffalo Creek to increase above the current criterion under certain conditions, it is not anticipated that such an increase will impact the bat species. Copper is not expected to bioaccumulate in emergent aquatic insects that the bats may prey upon; therefore in the event that bats do forage above Buffalo Creek, their dietary dose of copper is not expected to be problematic. Additionally, the range of expected copper criterion values under the proposed BLM-based framework is several orders of magnitude below the National Primary Drinking Water Regulations (NPDWR) copper standard of 1.3 milligrams per liter. While the NPDWR copper standard is based on human health considerations, the mammalian-based data used to derive the standard should also be applicable to bats. Based on the information above, the Service concurs with EPA's determination that the proposed site specific copper criterion for Buffalo Creek may affect, but is not likely to adversely affect the gray bat, Indiana bat, and northern long-eared bat.

Finelined pocketbook

The finelined pocketbook is known to occur in the Tallapoosa River which is hydrologically connected to Buffalo Creek through the Little Tallapoosa River. The confluence of the Little Tallapoosa River and the Tallapoosa River is located a considerable distance from the confluence of Buffalo Creek and the Little Tallapoosa River (>30 miles when a straight line is drawn, not accounting for actual river miles due to the meander of the Little Tallapoosa River); therefore any water quality changes in Buffalo Creek would be expected to have minimal, if not negligible,

influence on the Tallapoosa River. Additionally, there are no proposed changes to the current copper criteria in the Little Tallapoosa River, as it will still be subject to the current hardness-based copper criterion. Based on the distant location of finelined pocketbook occurrences and the negligible impact that Buffalo Creek water quality is expected to have on finelined pocketbook habitat in the Tallapoosa River, the Service concurs with the EPA's determination that the adoption of a site-specific copper criterion in Buffalo Creek may affect, but is not likely to adversely affect the finelined pocketbook.

This letter fulfills the requirements of section 7 of the ESA and further action is not required. If modifications are made to the Project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

Thank you for your cooperation in the effort to protect fish and wildlife resources. If you have any questions regarding this project, please contact Anthony Sowers at 912-832-8739 extension 3.

Sincerely yours,

Strant Colwell

Strant T. Colwell
Coastal Georgia Supervisor

cc: electronic only
EPA, Atlanta, Georgia (Jason Poe, Cecelia Harper)
Service, Athens, Georgia (Robin Goodloe)
Service, Townsend, Georgia (Anthony Sowers)